

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000725**Date Inspected:** 28-Oct-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 1430**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2300**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Xu Le Feng & Sha Zhi**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Mock Up & OBG**Summary of Items Observed:**

Elevation 89:

The Caltrans Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the fabrication of the Mock Up.

The QA Inspector randomly observed ZPMC welder Li Zhaoqian ID Number 048810, utilizing the Flux Cored Arc Welding (FCAW) process with approved ZPMC Weld Procedure Specification (WPS)

WPS-B-T-2231-B-U3-F, to weld fill passes in WJ MUSB-MA23-7 between Face C longitudinal plates piece marks mp534a-1 to mp534b-1. The QA Inspector observed ZPMC CWI Sha Zhi monitoring weld parameters. The QA Inspector also performed random verification of the weld parameters and documented them as follows: welding amperage 312 amps, welding voltage 32 volts with a travel speed of 300 millimeters per minute. Weld parameters appeared to comply with the above approved ZPMC WPS.

The QA Inspector randomly observed ZPMC welder Gu Caihong, utilizing the Submerged Arc Welding (SAW) process with approved ZPMC WPS WPS-B-T-2221-B-U5-S, to weld fill passes in WJ 25/26 on the 25 side, of the seam weld between the upper and lower sections of Skin Plate C, MUSB-MA23. The QA Inspector randomly observed weld metal being built up to approximately 30 millimeters above the bottom of the transitions between the 2 thicker sections and the center thinner section of Skin Plate C. The QA Inspector observed ZPMC CWI Xu Le Feng monitoring weld parameters. The QA Inspector also performed random verification of the weld parameters and documented them as follows: welding amperage 660 amps, welding voltage 32.8 volts with a travel speed of 620 millimeters per minute. Weld parameters appeared to comply with the above approved ZPMC

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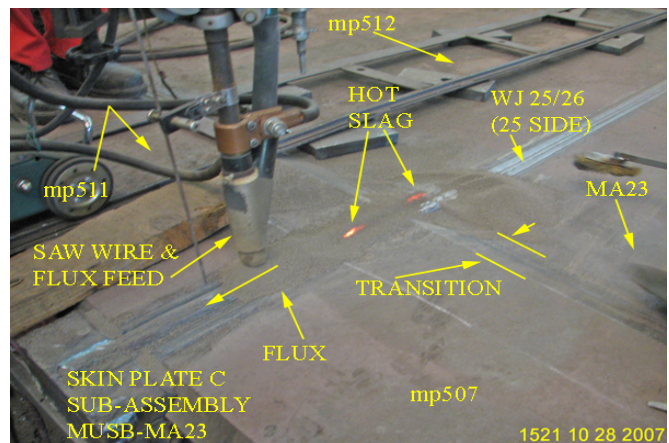
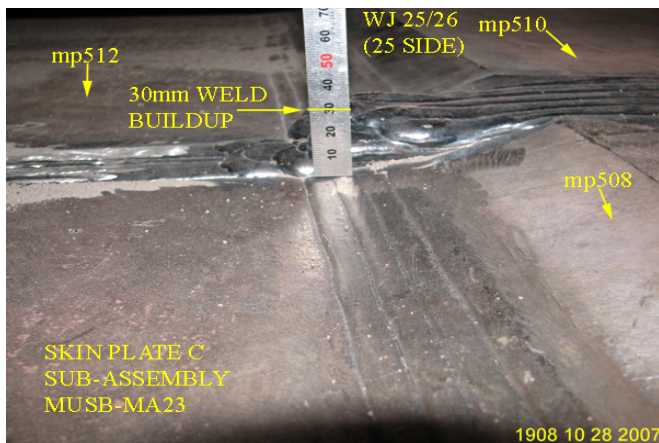
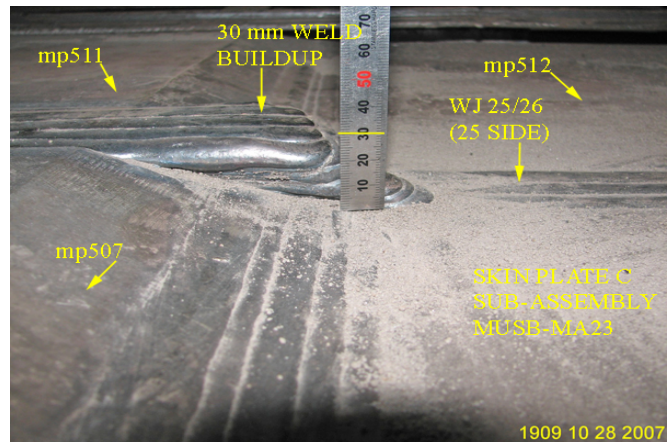
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WPS. The attached photographs provide additional detail.

The QA Inspector randomly observed a ZPMC helper utilizing a grinder to grind flush, WJ 10A on SA MUSB-MA21 Strut Splice Plate SA24-2. The following photograph provides additional detail.

Orthotropic Box Girders (OBG):

The QA Inspector observed ZPMC welding personnel utilizing a track mounted torch cutting apparatus to cut closed ribs to length for closed rib trial number 2.



## Summary of Conversations:

The QA Inspector asked ZPMC Representatives Fu Yuhong and Shen Xue Jun, why the weld metal was being built up on the transitions on Skin Plate C, and how the excess metal was going to be removed. Mr. Fu and Mr. Shen informed the QA Inspector that the excess weld metal would initially be removed with carbon air arc, and then blended with a grinder.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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**Inspected By:** Franco,Charlie

Quality Assurance Inspector

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**Reviewed By:** Cochran,Jim

QA Reviewer